

12. (Newly added) The device according to Claim 11, wherein said means
for extracting the noise power during reception includes :

sampling means and means of converting the signal at the end of the facility
into a digitized signal;

means for performing the digital demodulation of the signal and for obtaining
a demodulated signal;

means of digital modulation for modulating the demodulated signal and
obtaining a modulated signal; and

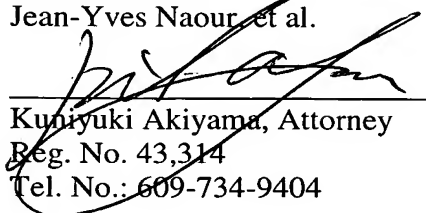
means for calculating the noise power from the modulated signal and the
digitized signal.

REMARKS

Claims 1-9 have been amended to overcome informalities. New claims 10-12
have been added. The abstract has been amended to be contained in a single
paragraph (MPEP § 608.01 (b)). It is believed that the claims and the amendment do
not add new matter.

No fee is believed due in regard to the present amendment. However, if a fee
is due, please charge the fee to Deposit Account 07-0832. Should any questions arise
regarding any of the above, the Examiner is requested to contact the undersigned at
609-734-9404.

Respectfully submitted,
Jean-Yves Naour et al.

By: 
Kuniyuki Akiyama, Attorney
Reg. No. 43,314
Tel. No.: 609-734-9404

Date: 13 Feb. 2002

Thomson Multimedia Licensing Inc.
Patent Operation
PO Box 5312
Princeton, NJ 08543-5312

Marked up Version of the Replacement Abstract to Show Changes made in
Accordance with 37 CFR 1.121 (b).

5 [Reception device with automatic gain control]

10 The invention aims to minimize the analogue/digital converter over-
dimensioning within the framework of reception of signals originating from a satellite
and exhibiting power levels which can vary over time. The invention proposes a
technique of automatic gain control which handles the setting of the noise level
associated with the amplified signal. The automatic gain control is achieved by
neutralizing the signal received by the antenna, and by adjusting the gain during the
neutralization of the signal received until a predetermined noise level is obtained at
the end of the reception facility. The invention also pertains to a device comprising
15 the means for implementing the method.

[Figure 2]

20

Marked up Version of the Replacement Claims 1-9 to Show the Changes Made in
Accordance with 37 CFR 1.121 (c).

5 [CLAIMS]
We claim:

10 1. (Amended) [Method of] A method for [automatic control of]
automatically controlling the gain in a [radiofrequency] radio frequency signal
reception device, [the] said device comprising at least one first low-noise
amplification stage placed following a reception antenna, and at least one variable-
gain device placed in the reception facility, [characterized in that the following steps
are performed:] the method comprising the steps of:

15 [-] neutralization of the signal received by the antenna[,] ; and
[-] adjustment of the gain during the neutralization of the signal received
until a predetermined noise level is obtained at the end of the reception
facility.

20 2. (Amended) [Method] The method according to Claim 1,
[characterized in that] wherein the neutralization of the signal received is carried out
by cutting off the supply to the first low-noise amplification stage.

25 3. (Amended) [Method] The method according to [one of] [Claims 1
or 2, characterized in that,] Claim 1, wherein during signal reception, the following
steps are performed:

[-] extraction of the noise power at the end of the reception facility[,] ; and
[-] adjustment of the gain until a predetermined noise level is obtained.

30 4. (Amended) [Method] The method according to Claim 3,
[characterized in that] wherein the extraction of the noise power at the end of the
facility is carried out by performing the following steps:

35 [-] sampling and digitization of the signal at the end of the reception
facility[,] ;
[-] digital demodulation of the digitized signal[,] ;
[-] modulation of the demodulated signal[,] ; and
[-] calculation of the noise power from the modulated signal and the
digitized signal.

40 5. (Amended) [Radiofrequency] A radio frequency signal reception
device, [the] said device comprising:

at least one first low-noise amplification stage placed following a reception antenna[, and] ;

at least one variable-gain device placed in the reception facility[, characterized in that it comprises:] ;

- 5 [-] means for neutralizing the signal received by the antenna[,] ; and
[-] means for adjusting the variable-gain device as a function of the noise level at the end of the reception facility.

6. (Amended) [Device] The device according to Claim 5,
10 [characterized in that] wherein the means for neutralizing the signal received are switching means which switch the supply of the first amplification stage.

7. (Amended) [Device] The device, according to [one of Claims 5 or 6, characterized in that it furthermore comprises:] Claim 5, further comprising:
15 [-] means for extracting the noise power during the reception of the signal[,] ; and
[-] means for adjusting the variable-gain device as a function of the noise level extracted.

8. (Amended) [Device] The device according to Claim 7,
20 [characterized in that] wherein the means for extracting the noise power during reception [comprise] includes:
[-] means of sampling and means of converting the signal at the end of the facility into a digitized signal[,] ;
25 [-] means for performing the digital demodulation of the signal and for obtaining a demodulated signal[,] ;
[- means of digital modulation] digital modulation means for modulating the demodulated signal and obtaining a modulated signal[,] ; and
[-] means for calculating the noise power from the modulated signal and
30 the digitized signal.

9. (Amended) [Device] A device for transmitting/receiving
[radiofrequency signals] radio frequency signal transmitted by a satellite,
[characterized in that it comprises the reception device of one of Claims 5 to 8]
35 comprising:
at least one first low-noise amplification stage placed following a reception antenna; and
at least one variable-gain device placed in the reception facility.